Remarks

Claims 13-20 are pending in the above-identified application. Claims 13, and 16 are amended, claims 1-12 and 15 are cancelled, claims 14 is original, and claims 17-20 are added.

The Examiner rejected the present claims under 35 U.S.C. 103(a).

MPEP §706.02(j) states:

"To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine reference teachings. Second, there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all the claim limitations. The teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991)."

MPEP §2143.01 provides: The mere fact that references can be combined or modified does not render the resultant combination obvious unless the prior art also suggests the desirability of the combination. In re Mills, 916 F.2d 680, 16 USPQ2d 1430 (Fed. Cir. 1990). Obviousness cannot be established by combining the teachings of the prior art to produce the claimed invention, absent some teaching, suggestion or incentive supporting the combination. ACS Hospital Systems, Inc. v. Montefiore Hospital, 732 F.2d 1572,1577,221 USPQ 929, 933 (Fed. Cir. 1984).

One court further noted that there were three possible sources for such motivation, namely "(1) the nature of the problem to be solved; (2) the teachings of the prior art; and (3) the knowledge of persons of ordinary skill in the art." Id. at 1357, 47 USPQ2d at 1458. Here, according to this court, the Board had relied simply upon "the high level of skill in the art to provide the necessary motivation," without explaining what specific understanding or technological principle within the knowledge of one of ordinary skill in the art would have suggested the combination.

The following is a summary of each of the cited prior art and an indication of the respective technical field.

Lee teaches a peripheral device having a personal disk used for storing device drivers. The peripheral device can be connected to an interface port of an electronic device host. The peripheral device has a housing, an application module for performing a predetermined operation, a storage module for storing a device driver of the application module, and a hub controller electrically connected to the application module and the storage module. When the hub controller is electrically connected to the interface port, the computer host can retrieve the device driver of the application module through the hub controller, and can run the device driver to control the application module to perform the predetermined operation. This invention relates to a peripheral device, in particular a peripheral device having a personal disk used for storing device drivers. It is a primary objective of this invention to provide a peripheral device having a personal disk used for storing device drivers.

Croyle teaches a mobile telephone handset is provided with a connector and circuitry which permits universal serial bus and single-ended modes of data transmission with another

device such as a personal computer, another mobile telephone handset or keyboard. This invention relates to a communication interface for permitting an electronic device to be in communication with another electronic device using first or second data transmission modes.

Laity teaches a user configurable, modular port expansion system allows the user of a host system such as a USB-enabled personal computer to customize a desired configuration of one or more peripheral device modules without the use of cables between modules. The peripheral device modules are physically and electrically connectable to each other side-by-side between a hub end module and a power end module in any sequence so that there can be provided, within the limits of the host port specification, virtually any number of selected, expanded functions in any combination. The peripheral device modules may include, by way of example, a standard parallel DB-25 port module, a two-port serial PS/2 module, a two-port serial DB-9 module, a four- or seven-port USB hub, an RJ-11 Ethernet LAN module, and an RJ-11 modem module. Where the host port is USB compliant, power to the peripheral device modules may be supplied by the host system via a USB standard cable connected to the USB port of the hub end module, or, if more power is required, by an external A.C. power adapter connectable to the power end module. The power end module may also include an USB expansion port. This invention relates generally to a port expansion system for connecting a single port, such as a USB port, on a host system such as a personal computer (PC) to various computer peripheral devices and functions, and particularly to such an expansion system that is user configurable so as to provide a high degree of flexibility and efficiency in the connection of the host system to a wide selection of peripheral devices and functions.

Yen teaches a hub having a hub control module and a wireless communication module. The hub control module can provide one upstream port and a plurality of downstream ports for individually connecting with the computer and a plurality of USB peripheral devices, or can provide a plurality of network connection ports for connecting with the network devices. The wireless communication module is connecting with the hub control module. The wireless communication module can be a bluetooth communication module or the wireless network communication module, so as the hub can be provided with the function of wireless communication. This invention can be convenient for users assembling the hub simultaneously provided with the function of bluetooth or wireless network and to achieve the advantage of high convenience and provide the advantage of saving more space for arranging other peripheral equipments. This invention generally relates to a hub, and more particularly relates to a hub provided with built-in wireless communication function. The primary object of this invention is to provide a hub provided with built-in wireless communication function in order to be convenient for users assembling the hub simultaneously provided with the function of bluetooth or wireless network and to achieve the advantage of high convenience.

Leete teaches an apparatus, computing unit, and cable for attaching peripheral devices to a computer. A power hub contains both a bus hub and a power supply. The bus hub is capable of attaching peripheral devices to the computer. A cable connects the power hub to a computer. The cable carries both power from the power supply to the computer and data signals between the computer and the power hub. This invention relates generally to computers and more particularly to the attachment of devices to computers.

Bakke teaches a redundancy manager in an I/O adapter that manages commands to peripheral devices in a computer system. These peripheral devices have multiple ports and may have a different bus associated with each port. The buses, referred to as independent pathways, moreover, need not have the same protocol. The redundancy manager determines the number of independent pathways connected to the peripheral device, presents only one logical device to the operating system and any device driver and any other command or device processing logic in the command path before the redundancy manager. For each incoming command, the redundancy manager determines which pathways are properly functioning and selects the best pathway for the command based on load balancing considerations and any ordering semantics that must be preserved in the incoming command and any outstanding commands and associated data that have not yet executed. The redundancy manager further reroutes the command to an alternate path and resets the device for the alternate path if the selected path failed. Thus, a dynamic mechanism and method to manage multiple pathways to I/O devices such as storage disks do not require the intervention of either the operating system of the computer or any device driver associated with the device or the interconnecting bus. This invention relates generally to the field of computer processing and more specifically relates to managing multiple physical paths from a host computer system to peripheral devices.

The Examiner rejected claims 1 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bakke (U.S. Patent No. 6704812 B2) in view of Leete (U.S. Pub. No. 2004/0225804 Al). With this amendment of the claims, claims 1 and 5 have been cancelled and therefore any discussion of the rejection of these claims is deemed moot.

The Examiner rejected claims 2, 4, 6, and 8 under 35 U.S.C. 103(a) as being unpatentable over Bakke (U.S. Patent No. 6704812 B2) in view of Leete (U.S. Pub. No. 2004/0225804 Al), and further in view of Yen (U.S. Pub. No. 2004/0198429 Al). With this amendment of the claims, claims 2, 4, 6, and 8 have been cancelled and therefore any discussion of the rejection of these claims is deemed moot.

The Examiner rejected claims 3 and 7 under 35 U.S.C. 103(a) as being unpatentable over Bakke (U.S. Patent No. 6704812 B2), in view of Leete (U.S. Pub. No. 2004/0225804 Al), in view of Yen (U.S. Pub. No. 200410198429 Al) and further in view of Laity (U.S. Pub. No. 2003/0135681 Al). With this amendment of the claims, claims 3 and 7 have been cancelled and therefore any discussion of the rejection of these claims is deemed moot.

The Examiner rejected claims 9, 11, and 12 under 35 U.S.C. 103(a) as being unpatentable over Bakke (U.S. Patent No. 6704812 B2) in view of Leete (U.S. Pub. No. 2004/0225804 Al), in view of Yen (U.S. Pub. No. 2004/0198429 Al) and further in view of Croyle (U.S. Pub. No. 2004/0133722 Al). With this amendment of the claims, claims 9, 11 and 12 have been cancelled and therefore any discussion of the rejection of these claims is deemed moot.

The Examiner rejected claim 10 under 35 U.S.C. 103(a) as being unpatentable over Bakke (U.S. Patent No. 6704812 B2), in view of Leete (U.,S. Pub. No. 2004/0225804 Al), in view of Croyle (U.S. Pub. No. 2004/0133722 Al), in view of Yen (U.S. Pub. No. 2004/0198429 Al) and further in view of Laity (U.S. Pub. No. 2003/0135681 Al). With this amendment of the claims, claim 10 have been cancelled and therefore any discussion of the rejection of this claim is deemed moot.

The Examiner rejected claims 13, 15 and 16 35 U.S.C. 103(a) as being unpatentabie over

Bakke (U.S. Patent No. 6704812 B2) in view of Leete (U.S. Pub. No. 2004/0225804 A1) and

further in view of Lee (U.S. Pub. No. 2005/0015536 A1).

Independent claim 13 has been amended to include the following steps: recognizing, by

the peripheral hub, peripheral devices connected to the peripheral hub; and separating peripheral

interfaces from the internal bus of the mobile phone and making respective peripheral interfaces

available on respective peripheral device outputs of the peripheral hub.

Regarding Claim 13, the Examiner alleged that Bakke teaches a method for interfacing a

data capable mobile phone to at least one peripheral device [Col 6, lines 20-22 & Col 6, lines 52-

55 & Col 8, lines 19-30 (the computer system in one embodiment could be a mobile device

including smartphones)], comprising: providing an internal bus in the mobile phone [Col 6, lines

23-26]; providing a peripheral hub having an input that is an I/O port and at least one output that

is an I/O port [Col 6, lines 61-63 & Fig 1 Items 115, 130, 132, 134, and 136 (it is inherent that

the hub will incorporate I/O ports)]; operatively connecting the internal bus to the input of the

peripheral hub [Col 6, lines 61-63 & Fig 1 Items 115 and 130 (it is inherent that the hub will

incorporate I/O ports)]; operatively connecting at least one peripheral device to the at least one

output of the peripheral hub [Col 6, lines 61-63 and lines 64-66 & Fig 1 Items 132, 134, and

136]. The Examiner further alleges that Bakke further teaches the internal bus of the mobile

phone exchanges data and control information with a CPU of the mobile phone [Col 6, lines 52-

55]. However, the Examiner admits that Bakke fails to specifically teach providing an I/O

interface device controller respectively for each I/O port in the peripheral hub and directing

control and data from the internal bus of the mobile phone to a corresponding interface device

controller for a respective peripheral device. The Examiner maintains that the claimed limitation was well known in the art as taught by Leete.

The Examiner alleged that Leete discloses a power hub [paragraph 0014] including; directing control and data from the internal bus of the mobile phone to a corresponding interface device controller for a respective peripheral device [paragraph 0030, lines 1-2 & paragraph 0032, lines 5-10 & Fig. 5 Item 540).

The Examiner then concluded that it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, the power hub as taught by Leete together with the system of Bakke in order to have a system with device controllers for the I/O ports.

The Examiner admits that this combination of Bakke and Leete fails to specifically teach; storing and installing drivers for peripheral devices connected to the peripheral hub. The Examiner maintains that the claimed limitation was well known in the art as taught by Lee.

The Examiner alleged that Lee discloses a peripheral device having a personal disk for storing drivers for an external device host [paragraph 0009 & paragraph 0029, lines 1-15 & paragraph 0030, lines 1-5].

The Examiner then concludes that it would have been obvious to one of ordinary skill in the art, at the time the invention was made to use, the peripheral device of Lee together with the combination of Bakke and Leete in order to have a system capable of storing and installing device drivers.

Independent claim 13, as amended, distinguishes over any combination of the cited prior art. For example, in the present invention, as claimed in independent claim 13, the drivers are stored in the peripheral hub for peripheral devices connected to the peripheral hub. These drivers

are then installed for the peripheral devices connected to the peripheral hub. As stated by the Examiner, Lee teaches a peripheral device having a personal disk for storing drivers for an external device host. Thus combining Lee with the other cited prior art would result in a system wherein the drivers are stored in the peripheral devices and not in the peripheral hub. The combination of the cited art therefore teaches away from the present claimed invention.

Furthermore, one skilled in the art would not have combined these prior art references since for example in general computer systems there would not be any necessity to store and load drivers from a peripheral hub. It is only with hindsight from knowing the present invention that the indicated combinations of the prior art would occur.

Regarding Claim 15, the Examiner alleged that the combination of Bakke, Leete, and Lee further teaches that the method further comprises recognizing peripheral devices connected to the hub [Leete: paragraph 0032, lines 5-8]. With this amendment of the claims, claim 15 have been cancelled and therefore any discussion of the rejection of this claim is deemed moot.

Regarding Claim 16, the Examiner alleged that the combination of Bakke, Leete, and Lee further teaches that the a plurality of peripheral devices are operatively connected to the peripheral hub, and a respective peripheral device of the plurality of peripheral devices is one of. mouse, trackball, monitor, keyboard, printer, scanner, digital camera, storage device, digital video camera, joystick, speaker, audio system, video display device, and microphone [Bakke: Col 6, lines 64-66].

Claim 16 is dependent respectively on independent claim 13, and therefore includes all the limitations of this independent claim. For the reasons set forth above with respect to the

independent claim, the rejection of claim 16 has been overcome and the Examiner is respectfully

requested to reconsider the rejection of this claim.

The Examiner rejected claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable

over Bakke (U.S. Patent No. 6704812 B2), in view of Leete (U.S. Pub. No. 2004/0225804 Al),

in view of Lee (U.S. Pub. No. 200510015536 Al) and further in view of Laity (U.S. Pub. No.

2003/0135681 Al).

Regarding Claim 14, the Examiner alleged that the combination of Bakke, Leete and Lee

teaches everything as applied above in Claim 13. However, the Examiner admits that this

combination fails to specifically teach the peripheral hub having a plurality of peripheral device

outputs, and a respective peripheral device output of the plurality of peripheral device outputs

being one of; DB25 parallel port connector, -HQI 5 connector, six pin mini DIN (PS/2)

connector, IEEE 1394 six pin connector, IEEE 1394 four pin connector, USB-A connector, and

USB-B connector. The Examiner maintains that the claimed limitation was well known in the

art as taught by Laity.

The Examiner alleged that Laity discloses a computer port expansion system including a

peripheral hub having a plurality of peripheral device outputs, and a respective peripheral device

output of the plurality of peripheral device outputs being one of; DB25 parallel port connector,

HD15 connector, six pin mini DIN (PS/2) connector, IEEE 1394 six pin connector, IEEE 1394

four pin connector, USB-A connector, and USB-B connector [paragraph 0043, lines 1-11]. The

Examiner then concludes that it would have been obvious to one of ordinary skill in the art, at the

time the invention was made to use, the hub module with the USB-Type B connectors as taught

by Laity together with the system of Bakke, Leete, and Lee in order to have at least one output

for use with smaller peripherals e.g. digital cameras, PDAs and handheld devices.

Claim 14 is dependent respectively on independent claim 13, and therefore includes all

the limitations of this independent claim. For the reasons set forth above with respect to the

independent claim, the rejection of claim 14 has been overcome and the Examiner is respectfully

requested to reconsider the rejection of this claim.

The prima facia case of obviousness determination has not been made out. Thus, the

opinion of obviousness is deficient and the Applicants are deserving of a patent.

Applicants respectfully submit that the applied references, taken singly or in combination,

assuming, arguendo, that the combination of the applied references is proper, do not teach or

suggest one or more elements of the claimed invention. Applicants have discussed herein one or

more differences between the cited prior art, and the claimed invention with reference to one or

more parts of the cited prior art. This discussion, however, is in no way meant to acquiesce in

any characterization that one or more parts of cited prior art correspond to the claimed invention.

With this amendment Applicant has added new claims 17-20. New independent claim 17

is directed to a system for interfacing to peripheral devices, comprising: a data capable mobile

phone having an internal bus; a peripheral hub operatively connected to the internal bus, the

peripheral hub having I/O ports; and a plurality of peripheral devices operatively connected to the

I/O ports of the peripheral hub. Furthermore, the system comprises the peripheral hub having: an

input operatively connectable to the internal bus of the mobile phone; peripheral device outputs

that are the I/O ports; and a functionality module having I/O interface device controllers for the

I/O ports operatively connected to the input and respectively to the peripheral device outputs, the

functionality module separating peripheral interfaces from the internal bus of the mobile phone and making respective peripheral interfaces available on respective peripheral device outputs of the peripheral hub; and the functionality module having functionality to recognize peripheral devices connected to the peripheral hub, and to store and install drivers for the peripheral devices operatively connected to the peripheral hub.
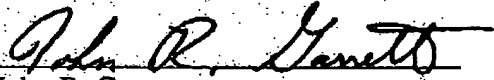
This combination of the elements of the present invention is not obvious in view of any of the cited prior art taken singly or in combination for the reasons set forth above in regards, for example, to the discussion of claim 13.

Claims 18, 19 and 20 are dependent claims that include all the limitations of independent claim 17, and are therefore also allowable over the cited prior art.

Reconsideration and withdrawal of the rejections is therefore respectfully requested. In view of the above remarks, allowance of all claims pending is respectfully requested.

The prior art made of record and not relied upon is considered to be of general interest only. This application is believed to be in condition for allowance, and such action at an early date is earnestly solicited. If a telephone conference would be of assistance in advancing the prosecution of this application, the Examiner is invited to call applicant's attorney.

Respectfully submitted,

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